

U.S. Application No. 10/676,020

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The Applicants request reconsideration of the rejection.

Claims 1-6 and 8 remain pending.

The Examiner objected to claim 7, citing minor informalities on page 2 of the Office Action. Claim 7 has been canceled without prejudice, rendering moot the objection.

Claims 1-8 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for the reasons set forth on pages 2-3 of the Office Action. The Applicants traverse the rejection of claims 1-6 and 8 (claim 7 having been canceled), for the reasons that follow.

In rejecting claims 1-6 and 8, the Examiner asserts that it is unclear how the various mechanisms recited in the claims carry out their intended functions without recitation to the structural elements, such as control elements and other structural elements that could possibly control operations and have such operations occur at certain times. Respectfully, however, the Examiner appears to be applying a standard for enablement and/or written description required to satisfy the first paragraph of §112. However, the Examiner has not objected to the specification as failing to provide such details, and it is believed that the specification provides a clear enabling disclosure and written description for the subject matter of the claims.

The Applicants refer the Examiner to the Manual of Patent Examining Procedure (MPEP) at §2173.02, §2173.04, and §2173.05(g) to support their assertion that the second paragraph of §112 is concerned with the clarity and definiteness of the scope of the invention sought to be patented, as contrasted with the requirement to enable the person of ordinary skill to make and use the invention.

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In §2173.02, the MPEP notes, "If the language of the claims is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35 U.S.C. §112, second paragraph, would be appropriate" (citing Morton Int'l., Inc. v Cardinal Chem. Co., 5f3d 1464, 1470, 28 USPQ 2d, 1190, 1195, Fed. Cir., 1993). Continuing, the MPEP notes "However, if the language used by applicant satisfies the statutory requirements of 35 U.S.C. §112, second paragraph, but the Examiner merely wants the applicant to improve the clarify or precision of the language used, the claim must not be rejected under 35 U.S.C. §112, second paragraph, rather, the Examiner should suggest improved language to the applicant." (emphasis in original)

Referring to claim 1 by way of example, the claimed automatic analyzer comprises a reagent bottle, a reagent sampling arm, a reaction cell, measuring means, a seal piercing tool, a stationary container, and (as amended) reagent sampling means. Each of these structural elements is recited appropriately according to its function within the inventive automatic analyzer, such that the person of ordinary skill can interpret the metes and bounds of the claims so as to understand how to avoid infringement. Moreover, the specification provides the necessary details for the person of ordinary skill in the art to make and use the invention, including control structure and functionality both expressly disclosed in the specification and drawn from the knowledge of the person of ordinary skill reading the specification. Thus, the Applicants respectfully submit that the functional language in the present claims drawn to the various mechanisms indeed sets forth sufficient information needed for the person of ordinary skill to understand both how the functions occur and how to avoid infringement of the claims.

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Referring to §2173.04, the Applicants note that the MPEP advises that "Breadth of a claim is not to be equated with indefiniteness" (citing In re Miller, 441 F2d 689, 169 USPQ 597 (CCPA, 1971)). Continuing, this section notes, "If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. §112, second paragraph."

In the present application, the Applicants submit that the scope of the subject matter embraced by the claims is indeed clear, and sufficiently broad to cover any control structure and/or functionality not expressly set forth in the claims (properly interpreted by reference to the specification). Again, the emphasis of the analysis under the second paragraph of §112 is on the clarity of the claims, particularly with reference to the interpretation of the scope of the claims, and not to the enablement of the invention, ("breadth is not indefiniteness").

Further, reference to §2173.05(g) of the MPEP reveals that "There is nothing inherently wrong with defining some part of the invention in functional terms. Functional language does not, in and of itself, render a claim improper." (In re Swinehart, 439 F2d 210, 169 USPQ 226 (CCPA 1971)).

Thus, although the Applicants understand the basis for the rejection, it is believed worth underscoring that the functionality noted by the Examiner is not per se indefinite.

For each of the foregoing reasons, the Applicants submit that the original claims were fully definite under the second paragraph of §112. However, independent claim 1 has been amended to positively recite "reagents sampling

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means having a moving mechanism for moving said reagent sampling arm, said reagent sampling means controlling said moving mechanism for fitting said seal piercing tool contained in said stationary container to said nozzle of said reagent sampling arm, withdrawing said seal piercing tool fitted to said nozzle from said stationary container, and piercing said seal of said reagent bottle with said seal piercing tool fitted to said nozzle, and for returning said seal piercing tool to said container." The Applicants submit that the added means strengthens the expression of the invention.

Claims 1-8 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kelln, WO 94/02826 (Kelln). The Applicants traverse as follows.

According to the present invention, the automatic analyzer comprises a reagent sampling arm for sampling the liquid reagent in the reagent bottle to the outside through an opening in the reagent bottle. The automatic analyzer further has a seal piercing tool for piercing the seal of the reagent bottle, the seal piercing tool having a fitted portion to be fitted to the nozzle of the reagent sampling arm (claim 1 as amended). Further, the automatic analyzer has a stationary container for containing the seal piercing tool and reagent sampling means having a moving mechanism for moving the reagent sampling arm, the reagent sampling means controlling the moving mechanism for fitting the seal piercing tool contained in the stationary container to the nozzle of the reagent sampling arm, withdrawing the seal piercing tool fitted to the nozzle from the stationary container, and piercing the seal of the reagent bottle with the seal piercing tool fitted to the nozzle and for returning the seal piercing tool to the stationary container (claim 1 as amended).

According to these features of the invention, the seal of the reagent bottle can be pierced with certainty, simple construction, and low cost, using the structure of the reagent sampling arm to perform the seal piercing.

On the other hand, Kelln discloses a chemical analyzer including a seal piercing mechanism of more complex construction, as shown in Figs. 20-23. Note the ram 140 holding the draw tube 27, which is moved upwardly by the ram in order to pierce the seal of the draw tube by using a puncture tube 161. Thereafter a pipette 18 is inserted into the draw tube through the puncture tube to suck the reagent in the draw tube.

Turning to the language of amended claim 1, Kelln fails to disclose or fairly suggest, at least, the reagent sampling means having a moving mechanism for moving the reagent sampling arm. According to claim 1, the reagent sampling means controls the moving mechanism for fitting the seal piercing tool contained in the stationary container to the nozzle of the reagent sampling arm, withdraws the seal piercing tool fitted to the nozzle from the stationary container and pierces the seal of the reagent bottle with the seal piercing tool fitted to the nozzle. On the other hand, Kelln reciprocates cover 160 across the top of the enclosure having the draw tube 27 and ram 140, using a rack 164 powered by a motor 166 and corresponding gearing. The cover 160 mounts the puncture tube 161 to resealably puncture closure 162 on the draw tube 27. The mounted puncture tube is thus moved from a first position to a puncturing position and then held in the puncturing position while the pipette 18 is inserted coaxially through the puncture tube and into the draw tube 27. After withdrawing the reagent from the draw tube 27, the cover 160 is retracted with the puncture tube 161, correspondingly returning the cover 160 and ram 140 to

a "home" position. Thus, one sees that Kelln does not disclose a corresponding reagent sampling means that controls the cover 160 to fit the puncture tube 161 contained in the cover 160 to the nozzle of the reagent sampling arm, withdraw the puncture tube fitted to the pipette 18 of the reagent sampling arm from the cover 160, and pierce the seal of the draw tube 27 with the puncture tube fitted to the pipette 18. Instead, Kelln never removes the puncture tube 161 from the cover 160, and moreover, the Kelln puncture tube 161 is not fitted to the pipette 18 when piercing the seal of the draw tube 27.

Claim 2 has separate patentability. Claim 2 requires that the moving mechanism be controlled for fitting the seal piercing tube over the nozzle reagent sampling arm by inserting the nozzle into the seal piercing tool contained in the stationary container from above when the seal piercing tool is to be fitted. Notably, claim 2 also requires that the moving mechanism be controlled for removing the seal piercing tool from the nozzle of the reagent sampling arm by inserting the reagent sampling arm, including the seal piercing tool fitted over the nozzle, into the stationary container when the seal piercing tool is to be removed. Of course, Kelln does not remove the puncture tube 161 from the cover 160, and certainly does not remove the puncture tube from the pipette 18 by inserting the probe arm 17 into the stationary container when the puncture tube 161 is to be removed.

Dependent claim 3 is separately patentable, requiring that the seal piercing tool include a lockable lever to prevent slipping-off of the seal piercing tool from the reagent sampling arm. Kelln discloses no structure for preventing the puncture tube 161 from slipping off the probe arm 17.

Dependent claim 4 requires the moving mechanism to be controlled for moving the reagent sampling arm, including the seal piercing tool fitted over the nozzle to a reagent sampling position, descending the reagent sampling arm to pierce the seal of a first reagent bottle, and then repeating the operation of piercing the seal of a next reagent bottle after rotating the disk. Kelln, on the other hand, moves the probe arm with the pipette 18 (corresponding to the claimed nozzle) to the reagent sampling position, and then moves the pipette 18 into the puncture tube 161, but does not move the probe arm 17 including both the puncture tube 161 and the pipette 18 to the reagent sampling position. Further, the probe arm 17 is not descended to pierce the seal of the draw tube 27. For each of these reasons, claim 4 is separately patentable.

Former independent claim 5 has been amended to be dependent on claim 1, and requires the moving mechanism to be controlled for moving the reagent sampling arm on a path along which one or more openings of one or more reagent bottles, the stationary container, and a reagent dispensing position are arranged. Kelln does not disclose the path required by dependent claim 5.

Claim 6 is dependent from claim 5, and recites limitations similar to those of claim 2. In addition, claim 6 requires the moving mechanism to function to couple and decouple the seal piercing tool and the reagent sampling arm with a combination of movement of the seal piercing tool along the path and vertical movement thereof. Kelln does not function in this manner, but rather holds the puncture tube 161 stationary while bringing the probe arm 17 to insert the pipette 18 into the puncture tube 161, differently from the coupling and decoupling required by dependent claim 6.

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Dependent claim 8 requires the seal piercing tool to have a slidable guide, the reagent bottle to have a guide for guiding the seal piercing tool, and alignment of the seal piercing tool and reagent bottle for engagement between their respective guides in a seal piercing operation. Kelln does not disclose corresponding guides that are aligned with each other in the seal piercing operation, and thus claim 8 has separate patentability.

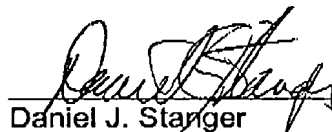
The Applicants note that the rejection does not treat the dependent claims and thus the Applicants respectfully submit that the next Office Action should not be a final rejection inasmuch as the Applicants have not had clear grounds for rejection to address. Nevertheless, the Applicants believe that all of the claims have been distinguished from Kelln as set forth above.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, the Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. KAS-192).

Respectfully submitted,

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